126. (new) The method of claim 75, 97, 104, 105, 107, 108, 110 or 111 wherein the purified compound is an antibody specific for a heat shock protein.

127. (new) The method of claim 75, 97, 104, 105, 107, 108, 110 or 111, wherein the purified compound is an antibody specific for specific for alpha (2) macroglobulin, antibody specific for a lipoprotein complex, an antibody specific for lactoferrin, an antibody specific for tissue-type plasminogen activator, an antibody specific for urokinase-type plasminogen activator, or an antibody specific for an exotoxin.

128. (new) The method of claim 126, wherein purified compound is an antibody specific for gp96.

REMARKS

The Examiner has required an election under 35 U.S.C. § 121 of one of the following inventions:

Group I	Claims 1-22 drawn to methods of identifying compositions that modulate HSP-alpha2M mediated processes.
Group II	Claims 23-26 drawn to methods of detecting an HSP-alph2M receptor related disorder
Group III	Claims 27-38, 74-93, and 96, are drawn to methods of modulating an immune response.
Group IV	Claims 39-40, are drawn to methods of increasing immunopotency of cancer cell.
Group V	Claims 41-43, drawn to a recombinant cell.
Group VI	Claims 44-46, drawn to a kit comprising an antibody or nucleic acid probe; HSP or nucleic acid encoding HSP or cell expressing HSP; and instructions.

Group VII	Claims 47-49, drawn to a kit comprising HSP, nucleic acids encoding for HSP, or a cell expressing HSP; alpha2M polypeptide, nucleic acids encoding alpha2M or a cell expressing such.
Group VIII	Claims 94-95, drawn to a kit comprising chromatography columns with alpha2M receptor ligand.
Group IX	Claims 50-54, drawn to a method of identifying alpha2M receptor fragments that bind HSP.
Group X	Claims 55-59 drawn to a method of identifying HSP fragments.
Group XI	Claims 60-62 drawn to methods for identifying molecules that bind to alpha2M receptor.
Group XII	Claims 63-71 drawn to methods of identifying compositions that modulates binding of alpha2M to alpha2M receptor.
Group XIII	Claims 72-73 drawn to a method of identifying a compound that modulates antigen presentation.

In response to the Restriction Requirement, Applicant elects to pursue the subject matter of the claims of group III, claims 27-38, 74-93, and 96, drawn to methods for modulating an immune response, classified in class 424, subclass 193.1. By the amendment made herein, claims 1-74 and 76-96 have been canceled without prejudice to pursue the subject matter of the non-elected claims in other applications. Claim 75 has been amended, and new claims 97-128 have been added, to clarify the invention. A marked-up version of the claim amendments, with additions indicated by underlining and deletions indicated by brackets, is provided herewith as Exhibit A. The new and amended claims are fully supported in the specification as originally filed. For example, support for the new claims can be found as follows:

Claims	Claim Recitation	Support
75	• recites a compound other than a complex of a heat shock protein and a peptide.	Section 5.6 page 51, line 5 through page 52, line 24.
	• recites a heat shock protein, a fusion protein comprising a heat shock protein.	page 43, lines24-29.
	• recites a compound other than lactoferrin, tissue-type plasminogen activator.	page 3, lines 29-35; page 12, line 30 through page 13, line 16; page 16, lines 32-36; and page 29, lines 17-31.
97	• recites the method, wherein the purified compound modulates the interaction of the alpha (2) macroglobulin receptor with a first heat shock protein.	page 51, lines 13-21.
98	• recites the method, wherein the purified compound binds the first heat shock protein.	page 10, line 2; and page 52, lines 2-3.
99	• recites the method, wherein the heat shock protein is gp96.	page 1, lines 25-27; page 6, line 36; and page 9, lines 7-9.
100	• recites the method, wherein the heat shock protein is Hsp70.	page 1, lines 25-27; page 7, line 2; and page 9, lines 7-9.
101	• recites the method, wherein the heat shock protein is Hsp90.	page 1 lines 25-27; page 7, line 2; and page 9, lines 7-9.
102	• recites the method, wherein the compound is an antibody specific for a heat shock protein.	page 10, line 2; and page 52, lines 2-3.
103	• recites the method, wherein the compound is an antibody specific for alpha (2) macroglobulin, lipoprotein complexes, lactoferrin, tissue-type plasminogen activator, urokinase-type plasminogen activator, or exotoxins.	page 3, lines 30-32; and page 12, lines 30-32.
104, 105	• recites the method for treating or preventing cancer.	page 7, line 10.
106	• recites types of cancers.	Section 5.9, beginning at page 73.

Claims	Claim Recitation	Support
107, 108	• recites the method for treating or preventing an infectious disease.	page 7, line 10.
109	• recites types of infectious agents.	Section 5.8, beginning at page 72.
110, 111	• recites the method for treating or preventing an autoimmune disorder.	page 7, line 10.
112	• recites types of autoimmune disorders.	Section 5.7, beginning at page 72.
113	• recites the method, wherein the compound binds alpha (2) macroglobulin receptor.	page 51, line 33 through page 52, line 4.
114	• recites the method, wherein the compound binds an alpha (2) macroglobulin receptor ligand.	page 51, line 33 through page 52, line 4.
115	• recites heat shock protein.	page 51, line 22.
116	• recites the method, wherein the compound is an antibody specific for alpha (2) macroglobulin, lipoprotein complexes, lactoferrin, tissue-type plasminogen activator, urokinase-type plasminogen activator, or exotoxins.	page 3, lines 30-32; and page 12, lines 30-32.
117	• recites the method, wherein the alpha (2) macroglobulin receptor ligand is a heat shock protein.	page 51, line 22.
118	• recites the method, wherein the heat shock protein is gp96.	page 1, lines 25-27; page 6, line 36; and page 9, lines 7-9.
119	• recites the method, wherein the heat shock protein is Hsp70.	page 1 lines 25-27; page 7, line 2; and page 9, lines 7-9.
120	• recites the method, wherein the heat shock protein is Hsp90.	page 1 lines 25-27; page 7, line 2; and page 9, lines 7-9.
121	• recites the method, wherein the compound is an agonist of alpha (2) macroglobulin receptor.	page 28, lines 5-11; and page 51, lines 21-24. receptor activity.
122	• recites the method, wherein the compound is an antagonist of alpha (2) macroglobulin receptor.	page 28, lines 5-11; and page 51, lines 21-24.

Claims	Claim Recitation	Support
123	• recites the method, wherein the compound is an antibody specific for alpha (2) macroglobulin receptor.	page 27, line 36; page 51, lines 11-13.
124	• recites the method, wherein the compound is a peptide.	page 9, line 37 through page 10, line 1.
125	• recites the method, wherein the compound is a small molecule.	page 9, line 37 through page 10, line 1.
126	• recites the method, wherein the compound is an antibody specific for a heat shock protein.	page 10, line 2; and page 52, lines 2-3.
127	• recites the method, wherein the compound is an antibody specific for alpha (2) macroglobulin, lipoprotein complexes, lactoferrin, tissue-type plasminogen activator, urokinase-type plasminogen activator, or exotoxins.	page 3, lines 30-32; page 9, line; and page 51, lines 33-36.
128	• recites the method, wherein the compound is an antibody specific for gp96.	page 9, lines 7-9; page 10, line 2; and page 52, lines 2-3.

Applicant respectfully requests that the present amendment and remarks be made of record in the instant application. An early allowance of the application is earnestly requested. Please charge the required fee, as estimated on the accompanying amendment fee transmittal sheet, to Pennie & Edmonds LLP Deposit Account No. 16-1150.

Respectfully submitted,

Date: April 29, 2002

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Enclosures

EXHIBIT A: MARKED UP VERSION OF THE CLAIM

Application No.09/750,972 (Attorney Docket No. 8449-134)

(as elected under 37 C.F.R. § 1.142)

Matter that has been added is indicated by underlining and matter that has been [deleted] is indicated by bracketing.

WHAT IS CLAIMED IS:

75. (amended) A method for treating or preventing a disease or disorder comprising administering to a mammal a purified compound, [that to the α2M receptor] other than lactoferrin, tissue-type plasminogen activator, heat shock protein, a fusion protein comprising a heat shock protein, or a complex between a heat shock protein and a peptide, which compound binds alpha (2) macroglobulin receptor, in an amount effective to treat or prevent the disease or disorder in the mammal.

EXHIBIT B: PENDING CLAIMS

Application No. 09/750,972 (Attorney Docket No. 8449-134)

(as elected under 37 C.F.R. § 1.142)

WHAT IS CLAIMED IS:

75. A method for treating or preventing a disease or disorder comprising administering to a mammal a purified compound, other than lactoferrin, tissue-type plasminogen activator, heat shock protein, a fusion protein comprising a heat shock protein, or a complex between a heat shock protein and a peptide, which compound binds alpha (2) macroglobulin receptor, in an amount effective to treat or prevent the disease or disorder in the mammal.

97. A method for treating or preventing a disease or disorder comprising administering to a mammal a purified compound, other than lactoferrin, tissue-type plasminogen activator, a heat shock protein, a fusion protein comprising a heat shock protein, or a complex between a heat shock protein and a peptide, which compound modulates the interaction of the alpha (2) macroglobulin receptor with a first heat shock protein, in an amount effective to treat or prevent the disease or disorder in the mammal.

98. The method of claim 97, wherein the purified compound binds to the first heat shock protein.

99. The method of claim 98, wherein the first heat shock protein is gp96.

100. The method of claim 98, wherein the first heat shock protein is Hsp70.

101. The method of claim 98, wherein the first heat shock protein is Hsp90.

102. The method of claim 98, wherein the purified compound is an antibody specific for the first heat shock protein.

103. The method of claim 75 or 97, wherein the purified compound is an antibody specific for alpha (2) macroglobulin, an antibody specific for a lipoprotein complex, an antibody specific for urokinase-type plasminogen activator, or an antibody specific for an exotoxin.

104. A method for treating or preventing cancer comprising administering to a mammal a purified compound, other than a heat shock protein, a fusion protein comprising a heat shock protein, or a complex of a heat shock protein and a peptide, which compound modulates the interaction of alpha (2) macroglobulin receptor with an alpha (2) macroglobulin receptor ligand, in an amount effective to treat or prevent the disease or disorder in the mammal.

105. A method for treating or preventing cancer comprising administering to a mammal a purified compound, other than a heat shock protein, a fusion protein comprising a heat shock protein, or a complex of a heat shock protein and a peptide, which compound binds alpha (2) macroglobulin receptor, in an amount effective to treat or prevent the disease or disorder in the mammal.

106. The method of claim 104 or 105, wherein the cancer is selected from the group consisting of: human sarcomas or carcinomas, fibrosarcoma, myxosarcoma, liposarcoma, chondrosarcoma, osteogenic sarcoma, chordoma, angiosarcoma, endotheliosarcoma, lymphangiosarcoma, lymphangioendotheliosarcoma, synovioma, mesothelioma, Ewing's tumor, leiomyosarcoma, rhabdomyosarcoma, colon carcinoma, pancreatic cancer, breast cancer, ovarian cancer, prostate cancer, squamous cell carcinoma, basal cell carcinoma, adenocarcinoma, sweat gland carcinoma, sebaceous gland carcinoma, papillary carcinoma, papillary adenocarcinomas, cystadenocarcinoma, medullary carcinoma, bronchogenic carcinoma, renal cell carcinoma, hepatoma, bile duct carcinoma, choriocarcinoma, seminoma, embryonal carcinoma, Wilms' tumor, cervical cancer, testicular tumor, lung carcinoma, small cell lung carcinoma, bladder carcinoma, epithelial carcinoma, glioma, astrocytoma, medulloblastoma, craniopharyngioma, ependymoma, pinealoma, hemangioblastoma, acoustic neuroma, oligodendroglioma, meningioma, melanoma,

neuroblastoma, retinoblastoma, leukemias, polycythemia vera, lymphoma, multiple myeloma, Waldenström's macroglobulinemia, and heavy chain disease.

107. A method for treating or preventing an infectious disease comprising administering to a mammal a purified compound, other than a heat shock protein, a fusion protein comprising a heat shock protein, or a complex of a heat shock protein and a peptide, which compound modulates the interaction of alpha (2) macroglobulin receptor with an alpha (2) macroglobulin receptor ligand in an amount effective to treat or prevent the infectious disease in the mammal.

108. A method for treating or preventing an infectious disease comprising administering to a mammal a purified compound, other than a heat shock protein, a fusion protein comprising a heat shock protein, or a complex of a heat shock protein and a peptide, which compound binds alpha (2) macroglobulin receptor in an amount effective to treat or prevent the infectious disease in the mammal.

109. The method of claim 107 or 108, wherein the infectious disease is caused by a infectious agent selected from the group consisting of: hepatitis type B virus, adeno-associated virus, cytomegalovirus, papilloma virus, polyoma viruses, SV40, adenoviruses, herpes simplex type I, herpes simplex type II, Epstein-Barr virus, poxviruses, variola vaccinia virus, RNA viruses, human immunodeficiency virus type I, human immunodeficiency virus type II, human T-cell lymphotropic virus type I, human T-cell lymphotropic virus type II, influenza virus, measles virus, rabies virus, Sendai virus, poliomyelitis virus, coxsackieviruses, rhinoviruses, reoviruses, rubella virus, Semliki forest virus, arboviruses, hepatitis type A virus, *Streptococcus pyogenes*, *Streptococcus pneumoniae*, *Neisseria gonorrhoea*, *Neisseria meningitidis*, *Corynebacterium diphtheriae*, *Clostridium botulinum*, *Clostridium perfringens*, *Clostridium tetani*, *Haemophilus influenzae*, *Klebsiella pneumoniae*, *Klebsiella ozaenae*, *Klebsiella rhinoscleromotis*, *Staphylococcus aureus*, *Vibrio cholerae*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Campylobacter* fetus, *Campylobacter jejuni*, *Aeromonas hydrophila*, *Bacillus cereus*, *Edwardsiella tarda*, *Yersinia enterocolitica*, *Yersinia pestis*, *Yersinia pseudotuberculosis*, *Shigella dysenteriae*, *Shigella flexneri*, *Shigella sonnei*, *Salmonella typhiimurium*, *Salmonella typhii*, *Treponema pallidum*,

Treponema pertenue, *Treponema carateneum*, *Borrelia vincentii*, *Borrelia burgdorferi*, *Leptospira icterohemorrhagiae*, *Mycobacterium tuberculosis*, *Toxoplasma gondii*, *Pneumocystis carinii*, *Francisella tularensis*, *Brucella abortus*, *Brucella suis*, *Brucella melitensis*, *Mycoplasma spp.*, *Rickettsia prowazeki*, *Rickettsia tsutsugumushi*, *Chlamydia spp.*, *Helicobacter pylori*, *Entomoeba histolytica*, *Trichomonas tenas*, *Trichomonas hominis*, *Trichomonas vaginalis*, *Trypanosoma gambiense*, *Trypanosoma rhodesiense*, *Trypanosoma cruzi*, *Leishmania donovani*, *Leishmania tropica*, *Leishmania braziliensis*, *Pneumocystis pneumonia*, *Plasmodium vivax*, *Plasmodium falciparum*, and *Plasmodium malaria*.

110. A method for treating or preventing an autoimmune disorder comprising administering to a mammal a purified compound, other than a heat shock protein, a fusion protein comprising a heat shock protein, or a complex of a heat shock protein and a peptide, which compound modulates the interaction of alpha (2) macroglobulin receptor with an alpha (2) macroglobulin receptor ligand in an amount effective to treat or prevent the autoimmune disorder in the mammal.

111. A method for treating or preventing an autoimmune disorder comprising administering to a mammal a purified compound, other than a heat shock protein, a fusion protein comprising a heat shock protein, or a complex of a heat shock protein and a peptide, which compound binds alpha (2) macroglobulin receptor in an amount effective to treat or prevent the autoimmune disorder in the mammal.

112. The method of claim 110 or 111, wherein the autoimmune disorder is selected from the group consisting of: insulin dependent diabetes mellitus, multiple sclerosis, systemic lupus erythematosus, Sjogren's syndrome, scleroderma, polymyositis, chronic active hepatitis, mixed connective tissue disease, primary biliary cirrhosis, pernicious anemia, autoimmune thyroiditis, idiopathic Addison's disease, vitiligo, gluten-sensitive enteropathy, Graves' disease, myasthenia gravis, autoimmune neutropenia, idiopathic thrombocytopenia purpura, rheumatoid arthritis, cirrhosis, pemphigus vulgaris, autoimmune infertility, Goodpasture's disease, bullous pemphigoid, discoid lupus, ulcerative colitis, and dense deposit disease.

113. The method of claim 75, 97, 104, 107, or 110 wherein the purified compound binds the alpha (2) macroglobulin receptor.

114. The method of claim 104, 107, or 110 wherein the purified compound binds the alpha (2) macroglobulin receptor ligand.

115. The method of claim 114 wherein the purified compound binds to a first heat shock protein.

116. The method of claim 114 wherein the alpha (2) macroglobulin receptor ligand is alpha (2) macroglobulin, a lipoprotein complex, urokinase-type plasminogen activator, or an exotoxin.

117. The method of claim 114 wherein the alpha (2) macroglobulin receptor ligand is a first heat shock protein.

118. The method of claim 117, wherein the first heat shock protein is gp96.

119. The method of claim 117, wherein the first heat shock protein is Hsp70.

120. The method of claim 117, wherein the first heat shock protein is Hsp90.

121. The method of claim 75, 97, 104, 105, 107, 108, 110 or 111 wherein the purified compound is an agonist of the alpha (2) macroglobulin receptor.

122. The method of claim 75, 97, 104, 105, 107, 108, 110 or 111 wherein the purified compound is an antagonist of the alpha (2) macroglobulin receptor.

123. The method of claim 75, 97, 104, 105, 107, 108, 110 or 111, wherein the purified compound is an antibody specific for alpha (2) macroglobulin receptor.

124. The method of claim 75, 97, 104, 105, 107, 108, 110 or 111, wherein the purified compound is a peptide.

125. The method of claims 75, 97, 104, 105, 107, 108, 110 or 111, wherein the purified compound is a small molecule.

126. The method of claim 75, 97, 104, 105, 107, 108, 110 or 111 wherein the purified compound is an antibody specific for a heat shock protein.

127. The method of claim 75, 97, 104, 105, 107, 108, 110 or 111, wherein the purified compound is an antibody specific for specific for alpha (2) macroglobulin, antibody specific for a lipoprotein complex, an antibody specific for lactoferrin, an antibody specific for tissue-type plasminogen activator, an antibody specific for urokinase-type plasminogen activator, or an antibody specific for an exotoxin.

128. The method of claim 126, wherein purified compound is an antibody specific for gp96.